Prieto J.¹, Murphy C.¹, Moore K.N.², Fader M.¹

¹University of Southampton, Faculty of Health Sciences, Southampton, United Kingdom, ²University of Alberta, Faculty of Nursing, Edmonton, Canada

INTRODUCTION & OBJECTIVES: The most frequent complication of intermittent catheterisation (IC) is urinary tract infection (UTI), but acceptability and ease of use are also important. It is unclear which catheter designs, techniques and strategies affect the incidence of UTI, are acceptable to users and are cost effective.

Objectives are to compare:
· single-use (sterile) versus multiple use (clean) catheters
· one catheter design versus another (e.g. hydrophilic coated versus uncoated)
· sterile versus clean catheterisation technique
in relation to UTI, other complications and user acceptability.

MATERIAL & METHODS: We searched the Cochrane Incontinence Group Specialised Trials Register (updated Sept 2013), reference lists of relevant articles and conference proceedings, and contacted other investigators for unpublished data or for clarification. Inclusion criteria were randomised controlled trials or randomised crossover trials comparing at least two different catheter designs, catheterisation techniques or strategies. Two reviewers assessed the methodological quality of trials and abstracted data as per standard Cochrane methods.

RESULTS: 28 studies met the inclusion criteria. A total of 1613 participants were enrolled and 1028 completed (64%). 60% of subjects were male. There were no significant differences between single-use (sterile) catheters versus multiple use (clean) catheters (Figure 1); sterile catheterisation technique versus clean technique, or one catheter design versus another (e.g. hydrophilic coated versus uncoated). Most studies were small and underpowered. Attrition was a problem which may have led to bias. There was considerable variation in length of follow-up and definitions of UTI. No studies addressed cost effectiveness. It was not possible to combine total data for some comparisons owing to study variations. Where there were data, confidence intervals were wide and hence clinically important differences in UTI and other outcomes could neither be identified nor reliably ruled out.
CONCLUSIONS: Despite 28 randomised trials on intermittent catheterisation, there is still no convincing evidence that UTI, other complications and user acceptability are affected by the use of single use catheters, by catheters with specialised coatings or by the use of sterile technique.